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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,043	12/17/2001	David E. McDysan	RIC01059	5663

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WORLD COM, INC.
TECHNOLOGY LAW DEPARTMENT
1133 19TH STREET NW
WASHINGTON, DC 20036

EXAMINER

LEE, CHI CHUNG

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 10/01/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,043

Applicant(s)

MCDYSAN, DAVID E.

Examiner

Chi-Chung E Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,7,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "22" has been used to designate three different BRs in figure 3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gleeson in view of Lewis et al (US 4,924,500).

As per claim 1, Gleeson discloses a virtual private network system (i.e. virtual private networks running across IP backbones, see page 1, abstract) that resists denial of service attacks (i.e. support for quality of service guarantees, see page 2, paragraph C) comprises:

a) one egress boundary router (i.e. ISP edge node, see figure 7.1) having connections to an access link (i.e. stub link, see figure 7.1), wherein the egress boundary router

transmit intra-VPN traffic and extra-VPN traffic from source within the VPN (i.e. IP tunnel).

b) two ingress boundary router (i.e. ISP edge node, see figure 7.1) coupled to the egress boundary router for communication utilizing a network based VPN protocol.

Gleeson does not expressly disclose the network system comprising a Differentiated Services network and separate the intra-VPN traffic and extra-VPN (i.e. public VPN) traffic such that denial of service attacks on said access link originating from sources outside the VPN can be presented.

Lewis discloses a network system comprising two communication paths, signal link and public network (i.e. Differentiated Service Network, see figure 1) which is used to coupling node A (i.e. an egress boundary router) and node B (i.e. an ingress boundary router). The CINS request message (i.e. intra-VPN traffic) is sent from the original node-A 10 to the terminating node-B 11. The intra-network call (i.e. extra-VPN traffic) can be established through a public network [see column 2 line 4 - column 3 line 63 and figure 1].

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to employ the public network path and protocol within the system of Gleeson to separate the intra-VPN traffic and extra-VPN.

The suggestion/motivation for doing so would have been used to separate the logical access path between intra-VPN traffic and extra-VPN so that the denial of service attacks can be prevented.

As per claim 3, Gleeson discloses the VPN network further comprising a plurality of customer premises equipment (CPE) edge routers each coupled to a respective one of plurality of ingress boundary routers [see page 13 paragraph 7.1.5].

As per claims 4, 5, Gleeson discloses the VPN network further comprising the access network (i.e. VPLS, see page 12 paragraph 7.0). Gleeson discloses the VPN network further comprising a plurality of customer premises equipment (CPE) edge routers to the access link (i.e. stub link, see figure 7.1).

As per claims 6, 7, Gleeson et al disclose a CPE based virtual private routed network (VPRN). One of the CPE routers is multi-homed to the ISP network. The stub links may be active, or so shown, there may be one primary and one or more backup links (i.e. plurality of tunnel), see page 6 paragraph 1-4). Lewis discloses the nodes in a private network become overloaded with intra-network calls, such calls will be re-routed from the private network to an available public network (i.e. partition the intra-VPN and extra-VPN traffic, see column 2 lines 4-25).

As per claim 8, Gleeson et al disclose that by modeling a VPN tunnel as just another type of link layer, many of the existing mechanisms developed for ensuring Quality of Service (QoS) over physical links can also be applied [see page 5 paragraph 4].

As per claims 9, 10, Gleeson discloses a virtual private networks (VPN) comprises:

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- a) an access network [see figure 7.1] having an access line to a destination host (i.e. CPE, 10.1.1.2, see figure 7.1) support a first logical connection (i.e. IP tunnel, see figure 7.1) for intra-VPN traffic;
- b) one egress boundary router (i.e. ISP edge node, see figure 7.1) having connections to an access link (i.e. stub link, see figure 7.1), wherein the egress boundary router transmit intra-VPN traffic and extra-VPN traffic from source within the VPN (i.e. IP tunnel).
- c) two ingress boundary router (i.e. ISP edge node, see figure 7.1) coupled to the egress boundary router for communication utilizing a network based VPN protocol such that resists denial of service attacks (i.e. support for quality of service guarantees, see page 2, paragraph C) on said access link originating from source (i.e. CPE 10.1.1.1, see figure 7.1) outside the VPN can be prevented.

Gleeson does not disclose expressly disclose the network system comprising a Differentiated Services network and separate the intra-VPN traffic and extra-VPN (i.e. public VPN) traffic such that denial of service attacks on said access link originating from sources outside the VPN can be prevented.

Lewis discloses a network system comprising two communication paths, signal link and public network (i.e. Differentiated Service Network, see figure 1) which is used to coupling node A (i.e. an egress boundary router) and node B (i.e. an ingress boundary router). The CINS request message (i.e. intra-VPN traffic) is sent from the original node-A 10 to the terminating node-B 11. The intra-network call (i.e. extra-VPN traffic) can be

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established through a public network [see column 2 line 4 - column 3 line 63 and figure 1].

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to employ the public network path and protocol within the system of Gleeson to separate the intra-VPN traffic and extra-VPN.

The suggestion/motivation for doing so would have been used to separate the logical access path between intra-VPN traffic and extra-VPN so that the denial of service attacks can be prevented.

As per claim 11, Gleeson discloses the VPN network further comprising a plurality of customer premises equipment (CPE) edge routers each coupled to a respective one of plurality of ingress boundary routers [see page 13 paragraph 7.1.5].

As per claims 12,13, Gleeson discloses the VPN network further comprising the access network (i.e. VPLS, see page 12 paragraph 7.0). Gleeson discloses the VPN network further comprising a plurality of customer premises equipment (CPE) edge routers to the access link (i.e. stub link, see figure 7.1).

As per claims 14,15, Gleeson et al disclose a CPE based virtual private routed network (VPRN). One of the CPE routers is multi-homed to the ISP network. The stub links may be active, or so shown, there may be one primary and one or more backup links (i.e. plurality of tunnel), see page 6 paragraph 1-4). Lewis discloses the nodes in a

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private network become overloaded with intra-network calls, such calls will be re-routed from the private network to an available public network (i.e. partition the intra-VPN and extra-VPN traffic, see column 2 lines 4-25).

As per claims 16-20, the claimed steps correspond to the functions of the elements of the claims 1,2,6-8, which has been rejected above, and thus rejected with the same reason applied thereto.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chi-Chung E Lee whose telephone number is 703-306-4153.

The examiner can normally be reached on 8 am - 5 pm, Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

C. L.

Chi-Chung Lee
09/24/2003


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
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